

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1. (Currently Amended) A method of treating a sample suspected of containing hepatitis C virus (HCV) containing samples to release HCV antigen and to inactivate antibodies that bind to the HCV antigen, which method comprises treating ~~HCV-containing~~ the sample samples with a treating agent containing:

(1) an acidifying agent,

(2) ~~a protein-denaturing agent, or~~ an amphoteric surfactant or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule,

wherein the method effects to effect the release of the HCV antigen and the inactivation of antibodies that bind to the HCV antigen.

2. (Withdrawn-Currently Amended) A method of treating a sample suspected of containing HCV containing samples to release HCV antigen and to inactivate antibodies that bind to the HCV antigen, which method comprises treating ~~HCV-containing samples the~~ sample with a treating agent containing:

(1) an acidifying agent,

(2) an amphoteric surfactant or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule, and

either of the following (3), (4) and (5):

(3) a protein-denaturing agent, a nonionic surfactant or a reducing agent,

(4) a monosaccharide or a disaccharide, and

(5) citric acid or a citric acid salt,

wherein the method effects to effect the release of the HCV-related antigen and the inactivation of antibodies against the HCV-related antigen.

3. (Cancelled)

4. (Currently Amended) ~~An~~ A method of detecting immunologically ~~the HCV antigen in a sample suspected of containing HCV,~~ comprising the steps of:

(1) treating the sample according to claim 1, and

(2) determining if HCV is present ~~detecting the HCV antigen~~ using a probe that binds to the HCV antigen.

5. (Previously Presented) A method according to claim 1 in which said acidifying agent is hydrochloric acid, sulfuric acid, acetic acid, trichloroacetic acid, trifluoroacetic acid, or citric acid.

6. (Currently Amended) A method according to claim 1 in which said amphoteric surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule is N-dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, N-tetradecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, N-hexadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, or ~~and~~ N-octadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate.

7. (Currently Amended) A method according to claim 1 in which said cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule is decyltrimethylammonium chloride, dodecyltrimethylammonium chloride, tetradecyltrimethylammonium chloride, hexadecyltrimethylammonium chloride, decyltrimethylammonium bromide, dodecyltrimethylammonium bromide, tetradecyltrimethylammonium bromide, hexadecyltrimethylammonium bromide, lauryl pyridinium chloride, tetradecyl pyridinium chloride, or ~~and~~ cetyl pyridinium chloride.

8. (Withdrawn-Currently Amended) A method according to claim 2 ~~claim 1~~ in which said protein-denaturing agent is urea or thiourea.

9. (Withdrawn-Currently Amended) A method according to claim 2 in which said nonionic surfactant is a polyoxyethylene isooctylphenyl ethers ~~such as Triton X-100 and Triton X-114~~, a polyoxyethylene nonylphenyl ethers ~~such as NP40~~ and a polyoxyethylene sorbitan[[e]] alkylesters ~~such as Tween 80~~.

10. (Withdrawn) A method according to claim 2 in which said reducing agent is cysteine, cysteamine, dimethylaminoethanethiol, diethylaminoethanethiol or diisopropylaminoethanethiol.

11. (Withdrawn-Currently Amended) A method according to claim 2 in which said monosaccharide or disaccharide is maltose, sucrose, trehalose, mannose, fructose, glucose, sorbitol, galactose, or and dextrose.

12. (Withdrawn-Currently Amended) A method according to claim 2 in which said citric acid or citric acid salt is citric acid, citric acid hydrate, sodium citrate, or and potassium citrate.

13. (Withdrawn- Currently Amended) A diagnostic reagent or a diagnostic kit for treating a sample to detect HCV antigen, the kit comprising substances containing at least one substance of the following (1) and (2) in a treating agent ~~for treating samples in order to detect the HCV antigen:~~

(1) an acidifying agent, and

(2) ~~a protein-denaturing agent, or~~ an amphoteric surfactant or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule.

14. (Withdrawn-Currently Amended) A diagnostic reagent or a diagnostic kit for treating a sample suspected of containing HCV to detect HCV antigen, the kit comprising substances

~~containing at least one substance of the following~~ (1) and (2) and at least one substance of the following (3) in a treating agent ~~for treating samples in order to detect the HCV antigen:~~

(1) an acidifying agent,

(2) an amphoteric surfactant or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule, and

(3) a protein-denaturing agent, a nonionic surfactant or a reducing agent.

15. (Cancelled)

16. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 13 in which said acidifying agent is hydrochloric acid, sulfuric acid, acetic acid, trichloroacetic acid, trifluoroacetic acid, or citric acid.

17. (Withdrawn-Currently Amended) A diagnostic reagent or a diagnostic kit according to any claim 13 in which said amphoteric surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule is N-dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, N-tetradecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, N-hexadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, or ~~and~~ N-octadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate.

18. (Withdrawn-Currently Amended) A diagnostic reagent or a diagnostic kit according to claim 13 in which said cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule is decyltrimethylammonium chloride, dodecyltrimethylammonium chloride, tetradecyltrimethylammonium chloride, hexadecyltrimethylammonium chloride, decyltrimethylammonium bromide, dodecyltrimethylammonium bromide, tetradecyltrimethylammonium bromide, hexadecyltrimethylammonium bromide, lauryl pyridinium chloride, tetradecyl pyridinium chloride, or ~~and~~ cetyl pyridinium chloride.

19. (Withdrawn-Currently Amended) A diagnostic reagent or a diagnostic kit according to claim ~~14~~ ~~13~~ in which said protein-denaturing agent is urea or thiourea.

20. (Withdrawn-Currently Amended) A diagnostic reagent or a diagnostic kit according to claim 14 in which said nonionic surfactant is a polyoxyethylene isooctylphenyl ethers ~~such as Triton X-100 and Triton X-114~~, a polyoxyethylene nonylphenyl ethers ~~such as NP40 and~~ or a polyoxyethylene sorbitan[[e]] alkylesters ~~such as Tween 80~~.

21. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 14 in which said reducing agent is cysteine, cysteamine, dimethylaminoethanethiol, diethylaminoethanethiol or diisopropylaminoethanethiol.

22. (Cancelled)

23. (Cancelled)

24. (New) A diagnostic reagent or a diagnostic kit according to claim 9 wherein the nonionic surfactant is Triton X-100 or Triton X-114.

25. (New) A diagnostic reagent or a diagnostic kit according to claim 9 wherein the nonionic surfactant is NP40.

26. (New) A diagnostic reagent or a diagnostic kit according to claim 9 wherein the nonionic surfactant is Tween 80.

27. (New) A diagnostic reagent or a diagnostic kit according to claim 20 in which the nonionic surfactant is Triton X-100 or Triton X-114.

28. (New) A diagnostic reagent or a diagnostic kit according to claim 20 in which the nonionic surfactant is NP40.

29. (New) A diagnostic reagent or a diagnostic kit according to claim 20 in which the nonionic surfactant is Tween 80.